DATA COMPRESSION

User Manual

Version 2.1

MTS *Mobility*

Table of Contents

Introduction

Purpose

The MTS Mobility Data Compression service provides faster connectivity for wireless applications using Windows or Pocket PC to access the Internet. This is illustrated in the System Overview below.

The Data Compression servers are connected to MTS Mobility's switch while the Data Compression client software is installed on the end users' computer or Personal Digital Assistant (PDA) - either device can connect to the Internet through a data-capable Digital cell phone or through a wireless modem card.

System Overview
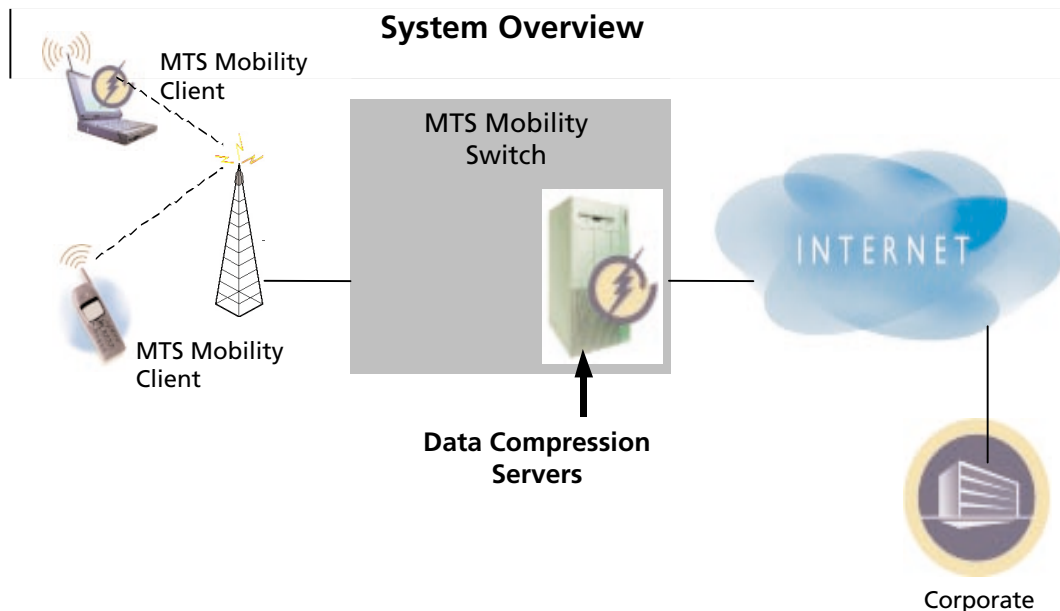
Getting Started

MTS Mobility's Data Compression service consists of a set of elements that provide wireless connectivity for applications through protocol optimization, compression, session management, authentication and encryption.

With Data Compression, users of mobile applications benefit through faster data exchange, session stability and communication privacy over the wireless network. The Data Compression software resides at both the client and server sides of the network.

This manual contains the information required to install, configure and maintain Data Compression software at the client site.

The installation procedure in this manual is shown step-by-step with visual representations of the screens encountered.

System Requirements

The system requirements are listed separately for Windows users and Pocket PC users.

Hardware Requirements

Windows Hardware Requirements

The minimum system requirements for the Data Compression Windows client software installation are as follows:

Hardware	Minimum	Recommended
Processor	Pentium II 266 MHz	Pentium III 350 MHz
RAM	32 MB	64 MB
Hard Disk	10 MB Free	20 MB Free

Pocket PC Hardware Requirements

The minimum system requirements for the Data Compression Pocket PC client software installation are as follows:

Hardware	Minimum	Recommended
Processor	StrongARM SA-1110	StrongARM SA-1110
Memory	16 MB SDRAM	32 MB SDRAM

Note: MTS Mobility currently supports the Compaq iPAQ Pocket PC. Please check http://www.mts.mb.ca for updates regarding other supported devices.

Software Supported

Operating System	• Windows NT 4.0 (SP 4 and above) • Windows 95 • Windows 98 • Windows 2000 • Windows Millennium Edition (ME) • Windows XP • Pocket PC (Windows CE 3.0)
Browser Support	• Microsoft Internet Explorer 5.0 and above • Netscape Navigator 4.61 and above • Pocket Internet Explorer (for Pocket PC)
FTP Clients	• Cute FTP • WS FTP • FTP Explorer
Mail Clients	• MS Outlook • MS Outlook Express • Netscape Messenger • Eudora • Pegasus

Note: The above list represents only a few of the more popular applications supported by MTS Mobility. MTS Mobility can support several other HTTP, FTP, and email clients.

Installing Data Compression Windows Client Software

This section describes how to install the Data Compression client software on a machine using Microsoft Windows. The Data Compression software provides a quick step-by-step wizard that guides you through the installation process.

Note: If you have a previous version of the software, uninstall the previous version before continuing with the new installation. Please see Appendix C (Uninstalling the Data Compression Client Software) for instructions on how to uninstall the previous version of the software.

To install the software:

1. Download the program to your laptop.

2. From the **Start** menu select the **Run** option and then browse to the executable file from your directory. Locate and double click on the executable file to begin the installation process.

3. The MTS Mobility Data Compression **Setup Welcome Screen** opens.

4. The installation program will load all necessary programs and configure the software accordingly.

5. Continue with the installation process by selecting the **Yes** option to restart your computer.

6. After rebooting your machine, the Data Compression installation will be complete and the Data Compression icon will appear on the bottom right corner of your computer screen (in the system tray).

Note: If the MTS Mobility license agreement appears on the screen, please read and click **Yes** if you agree to all terms of the agreement. If you do not wish to proceed, click **No**. This will end the installation process.

* The prerequisite for installing MTS Mobility's Data Compression software on Windows 95 is to install a WinSock 2 update on your machine. To install the system WinSock 2 update, please follow the directions on the link provided below:
http://www.microsoft.com/Windows95/downloads/. then enter "winsock 2" in the search field.

Data Compression Configuration For Windows

The Data Compression software's Configuration Tool allows you to configure the proxy setting, image quality, access for applications, and other Internet services.

Double click on the Data Compression icon located on the bottom right corner of your computer screen to open the Data Compression configuration window.

The Data Compression Configuration Window

The Data Compression configuration window holds the following tabs, each addressing a different subject.

Click on the corresponding tab to select the type of action desired, as listed in the following table:

Tab	Action
Images	Configuring image quality
Blocking	Blocking objects by content
Messaging	Setting the Server IP Address and Port Number for each messaging protocol
Network	Selecting the appropriate connection device for Internet access
Proxy	Entering the hostname/IP address and port number of the proxy servers

The Data Compression service will handle and accelerate your traffic based on these settings.

Configuring Image Quality

Image quality can be configured by selecting the **Images** tab in the **Configuration window**.

The Configuration Tool will appear displaying the **Images** tab window.

The Images tab allows you to select the level of image quality. There are five levels of image quality provided:

- low quality
- medium quality
- high quality
- superior quality
- original quality

Note: Selecting low image quality results in the most optimal browsing speed.
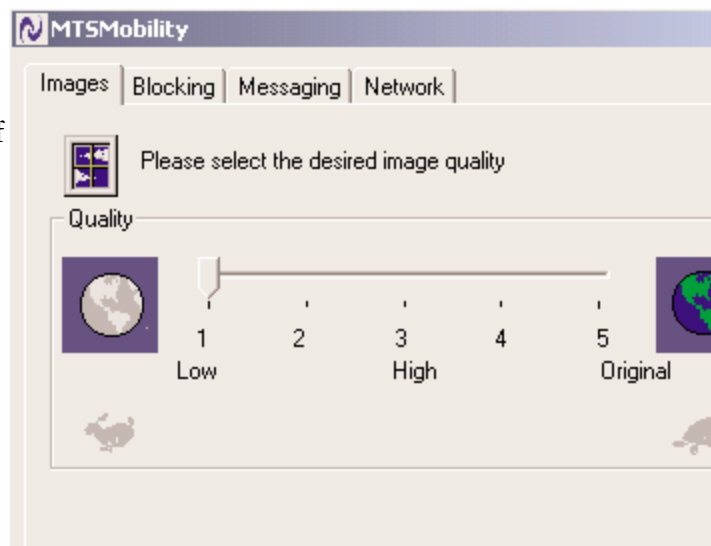
Low Quality – The example (right) is an image that provides maximum compression, and low image quality.

High Quality – The example (right) is an image that provides less compression with high image quality.
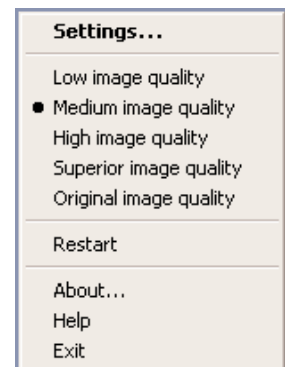

Original Quality – The example (right) is an image that provides no compression with the original image quality.

Accessing the Quick Settings Menu

Right clicking on the Data Compression icon will open the **Settings** menu, which allows you quick access to configuration. Simply select your desired option and the change will be applied immediately.


Content Blocking

The **Blocking** tab allows you to block certain objects from being loaded by your Web browser.

Blocking these items will improve your Web browsing speed and prevent selected blocked objects from being displayed by your Web browser.

The five main blocking options are provided below:

• **Animation** – By checking this box you will improve your Web browsing speed by only down-loading the first frame of an animated image file.

• **Applets** – By checking this box you will improve your Web browsing speed by blocking Applets, such as Java.

• **Audio** – By checking this box you will improve your Web browsing speed by blocking audio files, such as .wav files.

• **Images** –By checking this box you will improve your Web browsing speed by filtering out images.

• **Video** – By checking this box you will improve your Web browsing speed by filtering out video files, such as .AVI files.
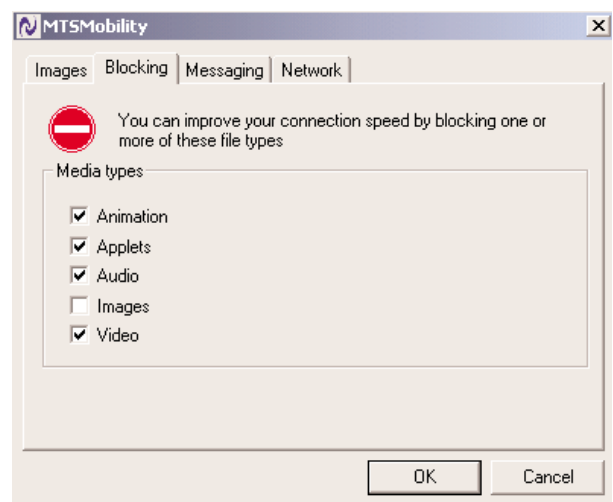
Messaging

The **Messaging** tab will enable you to set the Server IP Address and Port Number for each messaging protocol (POP3, SMTP, and NNTP). These protocols are designed to configure your email client program (such as Eudora, Outlook, etc.) and news programs.

After clicking the Messaging tab window, the following window will appear:

After typing in the Server IP Address, type in the Port Number for each protocol. The default values for port fields are already entered, based on industry standards.

• The default **POP3** Port is **110**.

• The default **SMTP** Port is **25**.

• The default **NNTP** Port is **119**.

The Data Compression service will forward and accelerate your traffic based on these settings.

Note: You will have to configure your Internet browser in order to optimize and accelerate performance. Please see Appendix B (Configuring Email Applications) for instructions.
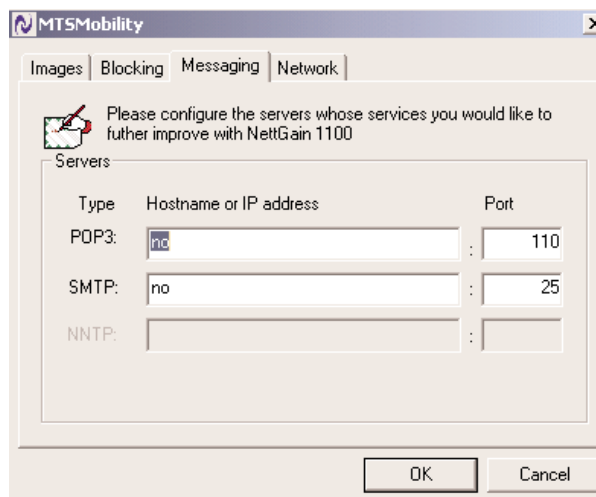
Network

The **Network** tab allows you to choose the wireless device you are using for Internet access.

Note: The Connections window of the Network tab lists the methods of connections you can access by your computer.

The method of communication you use to access Internet determines the NIC you may use. If you use a landline dial-in connection, most certainly you will use a circuit switch method.

Wireless access can use circuit switching or packet switching, depending on the method used by the service provider. Verify that your NIC is compatible with the method used by the service provider.

Click the Network tab and the following window will appear:

The software will automatically set the proxy settings for Internet Explorer users. Netscape users must manually change these proxy settings. Please refer to Appendix A for more information on manual configuration of proxy settings.

Note: If you regularly utilize other proxy settings, the software will restore your original settings when you uncheck the current connection or close the Data Compression application.
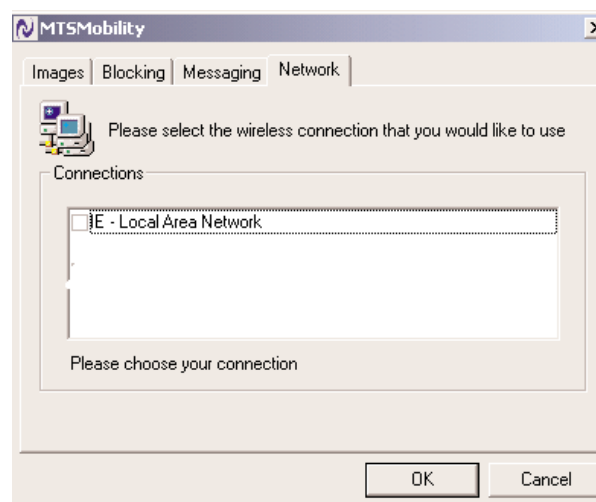
Data Compression Icons

The following icons will display in the Windows system tray as a visual indicator of the functional status of the Data Compression application.

	MTS Mobility *Animated Blue*	Data Compression is active. A connection to the Data Compression server has been established and data is currently being accelerated.
	MTS Mobility *Gray*	Data Compression is active but currently no data is being transmitted.
	MTS Mobility *Black with Red Circle*	The Data Compession server is unavailable. A request for a connection has been transmitted but the server has not been found. The current connection is in Bypass mode and a direct connection will be established as soon as the server becomes available. Applications are still operational, but not using Data Compression acceleration.

Installing Data Compression Pocket PC Client Software

This section describes how to install the Data Compression software on a Pocket PC device. The Data Compression software provides a quick step-by-step wizard that guides you through the installation process.

Note: If you have a previous version of the software, uninstall the previous version before proceeding with the new installation. To identify the version of software, go to the Today screen and click on the [icon] client icon, then click 'About'. Please see Appendix C (Uninstalling the Data Compression Client Software) for instructions on how to uninstall the previous version of the software.

To install the software:

1. Download the program to your computer from the MTS Web site.

2. Connect your Pocket PC to the desktop computer.

3. Double-click the **Setup.exe** file.

4. The installation will begin. Follow the on-screen directions. Once the software has been installed on your computer, the installer will automatically transfer the software to your Pocket PC.

Notes:

1. If the Pocket PC is not connected at the time of the installation, a message will be displayed indicating that the next time you connect the Pocket PC, the Data Compression software will automatically be copied over to your device.

2. If a copy of Microsoft ActiveSync is not available on the host computer, download a copy at **http://www.microsoft.com**.

Data Compression Configuration for Pocket PC 2002

This section describes how to configure Data Compression on your Pocket PC.

1. Activate the **Data Compression client** by clicking on it from the 🎴 menu.

2. Click on the **Start** button located on the top left-hand corner of the screen.

3. Select the **Today** page to verify that the Data Compression icon 〰 is displayed at the bottom of the page.

4. Click on the **Data Compression** icon located on the bottom right corner of your Pocket PC.

5. Click on the **Controls** option.
6. The Data Compression configuration window should appear.
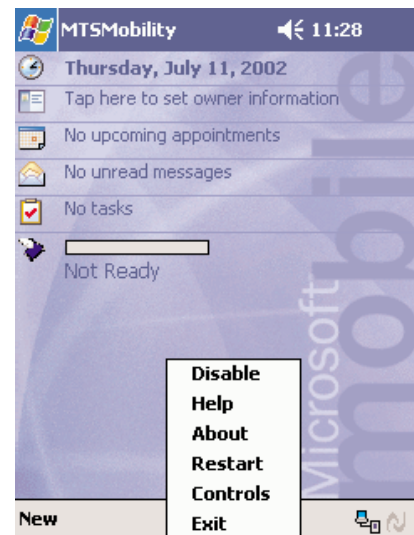
Configuration Window

The Data Compression configuration window holds the following setting tabs: General, Content, Advanced and Connections.

Click on the corresponding tab to select the type of action desired, as listed in the following table:

Tab	Action
General	Configuring image quality.
Content	Blocking objects based on content type.
Advanced	Setting Mail Server IP address and port number.
Connections	Dial-up network session used by Data Compression.

The Data Compression service will handle and accelerate your traffic based on these settings.

General

The MTS Mobility configuration window will default to the General tab.

1. Click on the **General** tab.

2. The window should appear displaying the Image Quality.

3. The user must select between Low, High and Original Quality.

   Low Quality – Provides maximum compression and low image quality.

   Original Quality – Provides no compression with the original image quality.

   Note: Selecting Low image quality results in the most optimal browsing speed.

9
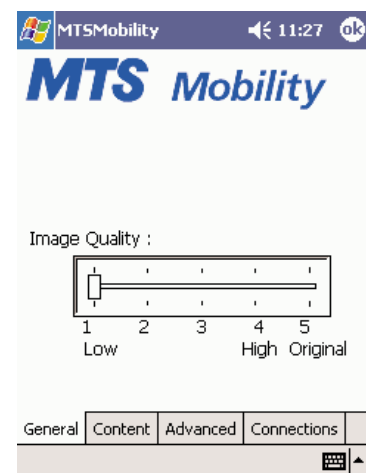
Content Blocking

The Content tab allows you to block certain objects from being loaded by your Web browser. Blocking these items will improve your Web browsing speed.

1. Click on the **Content** tab.
2. The Content window should appear displaying the **Blocking** heading.
3. The user should see the Animation, Audio, Applets and Video check boxes located below the **Blocking** heading.
4. Select the appropriate check box to improve your browsing speed.

The blocking options are provided below:

- **Animation** – By checking this box you will improve your Web browsing speed by only downloading the first frame of an animated image file.
- **Applets** – By checking this box you will improve your Web browsing speed by blocking Applets, such as Java.
- **Audio** –By checking this box you will improve your Web browsing speed by blocking audio files, such as .wav files.
- **Video** – By checking this box you will improve your Web browsing speed by filtering out video files, such as .AVI files.
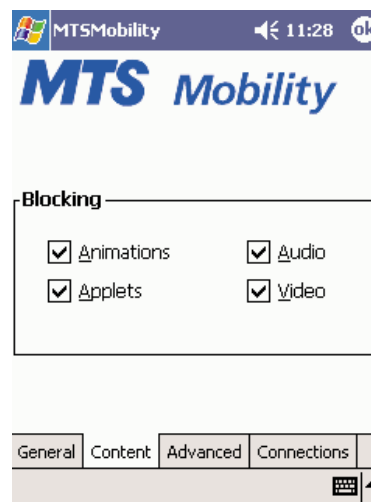
Advanced

The Advanced tab will enable you to set the Server IP Address and Port Number for each protocol (POP3, SMTP, and NNTP). These protocols are designed to configure your email client program and news programs.

1. Click on the **Advanced** tab.

2. The **Advanced** window should appear displaying the **Host Name** heading.

3. The user should see the protocol fields located below the **Host Name** heading.

4. Type in the Server IP Address and Port Number for each protocol.
   - The default **POP3 Port** is **110**.
   - The default **SMTP Port** is **25**.
   - The default **NNTP Port** is **119**.

Data Compression will accelerate your traffic based on these settings.

**Note:** You can either type in the Server IP Address or type in the Host Name.

Note: You must also modify your mail program settings to talk to the local host.
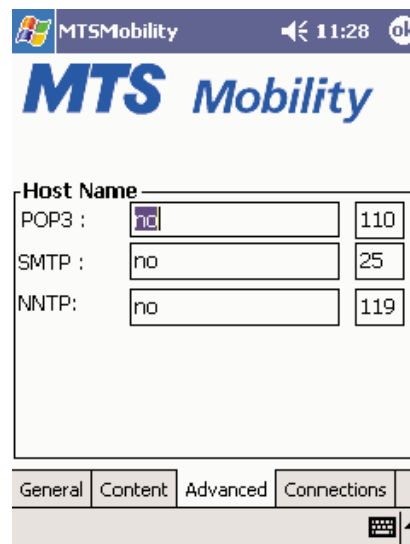
Connections

The Connections tab will enable you to choose the connection that you would like to enhance.

1. Click on the **Connections** tab.

2. The **Connections** window should appear displaying the **Connection List**.

3. Select the appropriate check box.

4. The user must disconnect and reconnect for the changes to take effect.
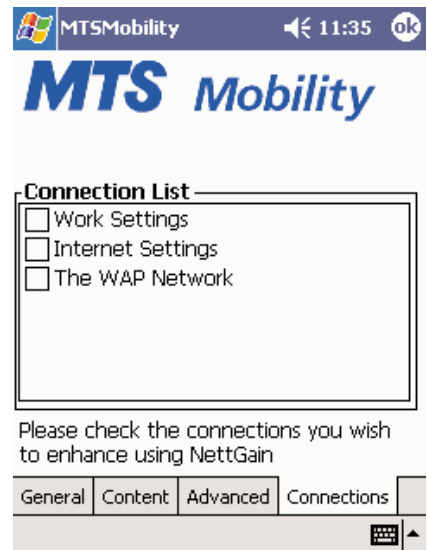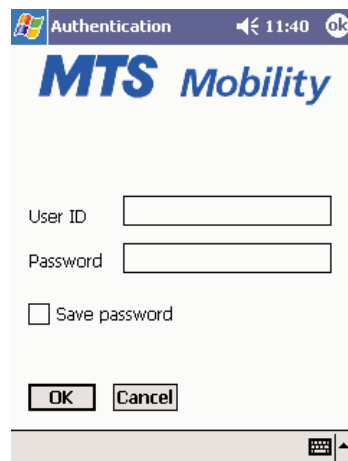
Radius for Windows and Pocket PC

Data Compression Authentication

In order to prevent unauthorized access to the optimized capabilities of the wireless network, radius authentication is used to verify that only authorized users will gain access to the Data Compression servers. When a user tries to establish a Data Compression connection, an authentication dialog box will be displayed. If the appropriate username and password combination is entered, a Data Compression connection will be established. Otherwise, the Data Compression client will operate in bypass mode.
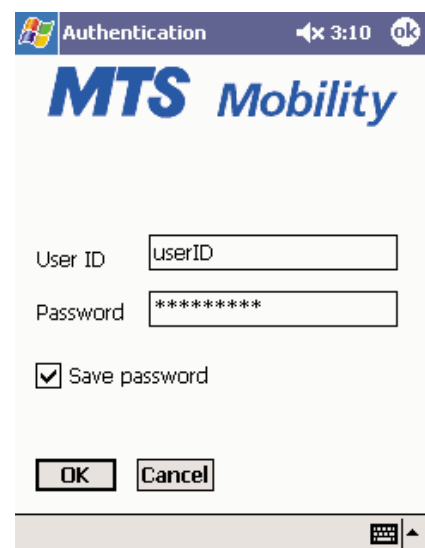
Data Compression Client Software

The Data Compression client software must be version 2.xx or higher in order to participate in the authentication process. The following steps describe a typical authentication process:

1. Start Internet Explorer or Netscape.
2. Enter the URL and press Enter.
3. A popup box will be displayed. Enter your user ID and Password. If you did not receive a user ID and Password, please contact MTS Mobility Customer Service at 225-5687 (CALLMTS).

4. If the authorization information that you entered is correct, the Data Compression icon will turn to Active (animated blue) and the Web page will be displayed. The Authentication Dialog box will display every time you establish a new Data Compression session. To avoid entering your details every time, simply click on **Save Password** and your password will be saved locally.
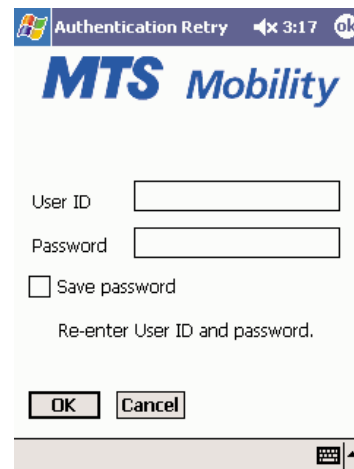
Errors

A user may encounter errors due to incorrectly entering their user ID or password. Other error messages might be presented in the case of network issues. Please refer to the errors below for explanation.

Incorrect User ID or Password Entered

This dialog box will be presented if the user entered the wrong user ID or Password.

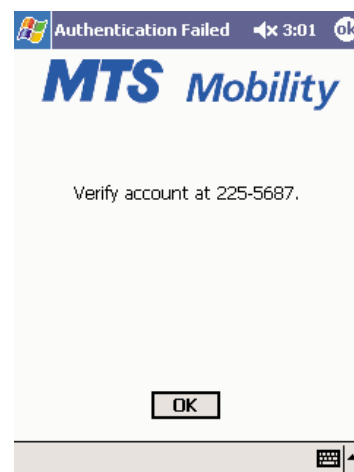The user must correctly re-enter their user ID and Password to be authorized and to establish a Data Compression connection. *Please note that user IDs and passwords are case sensitive.*

Incorrect User ID or Password Set

This dialog box will appear if your user ID and password were not set correctly in the service provider servers. Please contact your service provider to obtain a new user ID and password.

Network Problem

This dialog box will appear when a network problem occurs.

Please contact MTS Mobility Customer Service to report this problem.

Troubleshooting

Troubleshooting starts with identifying the problem. Review the possible problems and malfunction symptoms identified below with recommended actions. If these actions do not solve the problem please contact MTS Mobility Customer Service at 225-5687 (CALLMTS).

Malfunction Symptoms	Action to Take
There is no Data Compression client icon in task bar (for Windows) or Today screen (for Pocket PC). – Indicates that the Data Compression program is not running.	**1. For Microsoft Windows platform users:** Click on the Start button, open Programs and then select MTS Mobility Client to start the application. If this does not work, reinstall the software. **2. For Pocket PC users:** Start the Data Compression application by clicking on , and then on the **Data Compression** icon. If that does not work, reset the Pocket PC and make sure the icon is displayed. If the service is still not running, try reinstalling the software. To syncronize the Pocket PC with your desktop computer or laptop, locate and click on the **MTSMobilityPPC.exe** file and follow all on screen directions.
MTS Mobility icon displays black with a red circle. The black and red icon indicates that the client software is unable to communicate with the Data Compression server.	**Verify your wireless connection to the network.** 1. Verify that your wireless modem is communicating with the MTS Mobility network and try to browse the Web without Data Compression. 2. If you are able to browse the Web without Data Compression, restart the application and try again.
My Web page download is very slow. What can I do to improve Web page performance?	Check that the Data Compression software is being utilized by verifying that the icon is blue when accessing a Web page. Also, check that Image Quality is set to Low and all Content Blocking objects are checked.
During download of a Web page, I noticed that a red X replaces some of the images. What is wrong and what can I do?	A red X will appear in lieu of images if you have chosen to block images. If you would like to see the images, make sure that setting is not checked. **OR** During Web page access, the connection from the computer to the MTS Mobility network may cause timeouts on the browser side, which will result in a red X instead of the original image.

Malfunction Symptoms	Action to Take
After changes to the Image Quality, I hit the refresh button on my browser but nothing changes. How can I improve the image?	For a specific page, you can press the CTRL key while clicking on the refresh button – this will prevent the browser from using cached content for this specific page. To make sure all future pages will use the new Image Quality settings please clean your browser cache.
I uninstalled my Data Compression client software and now Internet Explorer or Netscape does not work. I am getting a **this page could not be found.** What should I do?	Check the proxy settings in your browser. Make sure that your browser does not try to access the Data Compression server but instead goes directly to the Internet.
After configuring my browser manually to pages look distorted (garbage-like text and no images). I tried to Refresh and Restart the application but the problem persists, and the Data Compression icon color is blue. When I disable the application, my Web pages look all right.	The Web browser might not be compatible with MTS Mobility's Data Compression service. Please verify you are using one of the supported Web browsers (see section 2.2 or check **mts.mb.ca/datacompression** for an updated list of supported Web browsers).
After installing the Data Compression application for MS Exchange, I started my Outlook and a login screen is not displayed (as stated in the User manual). The Data Compression icon does not change when I send and receive emails (it stays gray) and I am not able to send or receive new emails.	The following possibilities exist: • It might be that your Outlook session is using old credentials. Please logout of your Windows session and retry the service. • If you still don't see the login screen when you start Outlook please find **extend.dat** file (you can use the Windows Start → Search utility), delete this file and restart the Data Compression application. • Use your original (non-wireless) Outlook icon to start Outlook. Verify your Offline Folder File Settings are set correctly (Tools → Email Accounts etc).
I was able to get emails using the wireless link before, but suddenly I don't get any new emails and emails I wrote are still in the Outbox.	• Check your wireless connection. • Restart Data Compression (right click on the icon and select Restart in the sub-menu) and click the Send/Receive button again.
Back at the office I started to use my Online profile again but I don't seem to get new emails into my Inbox.	Verify that you are using your online profile and not the offline (wireless) one. If you are not certain, restart the computer and use the Online (original) Outlook icon.

Appendix A – Manually Configuring Your Browser

Data Compression supports the following browsers:

- Intenet Explorer
- Netscape
- Pocket Internet Explorer

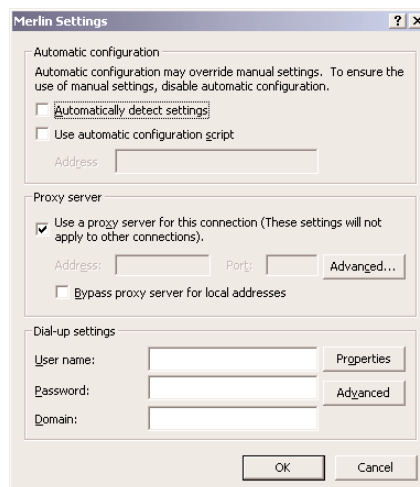The browser can be manually configured to work with the Data Compression application.

Manually Configuring Internet Explorer 5.x for Data Compression

Data Compression is compatible with many wireless modem cards and data-capable Digital phones. To configure a wireless connection, follow the instructions provided below:

1. Double-click the **Internet Explorer** icon to open browser. Select **Internet Options** from the Tools menu.

2. The procedure for configuring the browser is identical for most wireless cards and phones.

3. Click the **Connections** tab as shown on next page.

4. Select your connection in the **Dial-Up Network** settings sub-window and click **Settings**.
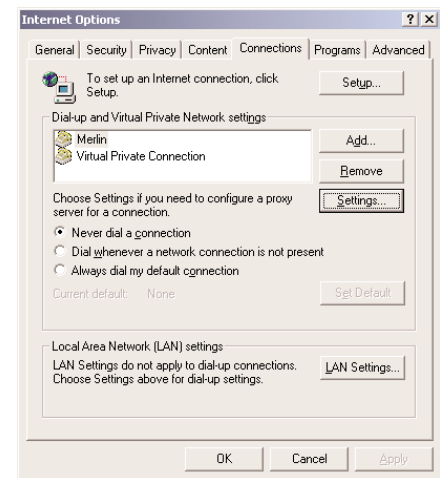
5. Select **Use a proxy server**. Check box in the Proxy Server sub-window.

6. Click **Advanced** to open Proxy Settings window.

7. In the **HTTP** field, enter localhost and then enter **9090** in the related Port field.

8. In the **Secure** field, enter localhost and then enter **9092** in the related Port field.

9. In the **FTP** field, enter localhost and then enter **9093** in the related Port field.

10. Click **OK**. Click **OK** again. Click **OK** one last time to complete configuring Internet Explorer.
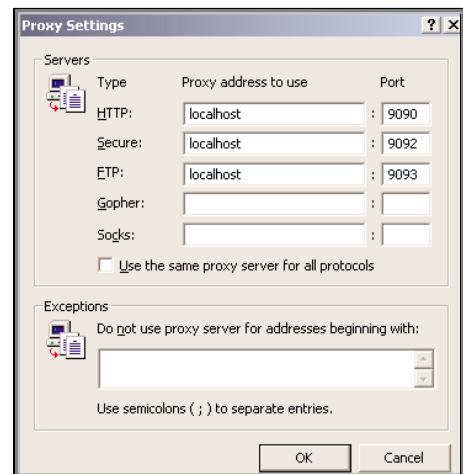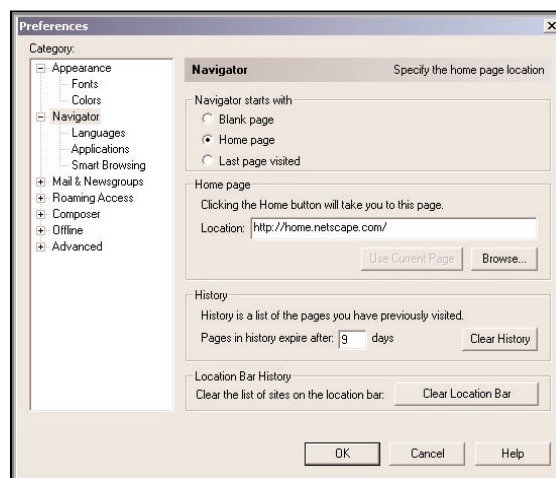

# Manually Configuring Netscape for Data Compression

After completing installation of the Data Compression software, all Netscape users must follow the detailed procedure below to configure the browser to work with the Data Compression software.

Open the Netscape browser.

1. From **Edit** menu, select **Preferences.** The Preferences window is displayed below:

2. Click **Advanced** in the Category tree and then click **Proxies**. The Proxy Configuration options are displayed below.
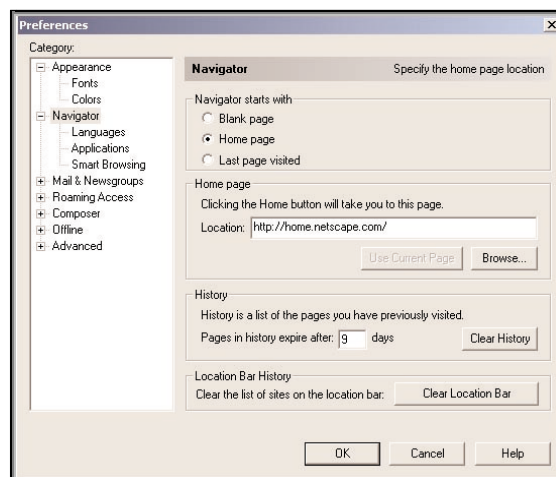
3. To configure the Proxy Server settings, select the **Manual Proxy Configuration** option by clicking the **View** button. The Manual Proxy Configuration window is shown below.

4. In the **HTTP** field, enter localhost and then enter **9090** in the related Port field.

5. In the **Security** field, enter localhost and then enter **9092** in the related Port field.

6. In the **FTP** field, enter the localhost and then enter **9093** in the related Port field.

7. Click **OK** to save the Proxy server settings.

8. Click **OK** to exit the Preferences window.

9. Restart your Netscape Browser.
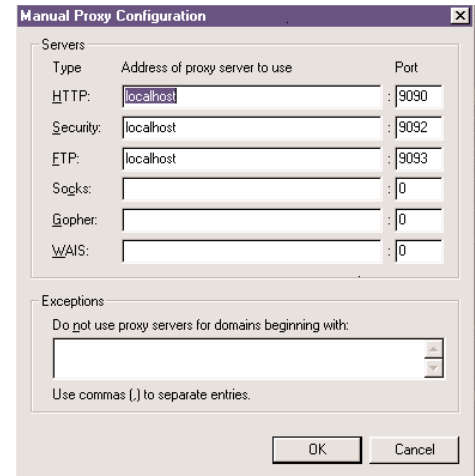
## Manually Configuring your Web Browser for Pocket PC

Your browser can be manually configured to work with Data Compression.

Note: To disable Data Compression, uncheck the Use proxy server box.

Data Compression is compatible with many wireless modem cards and data-capable Digital phones. To configure a wireless connection, follow the instructions provided below. The procedure for configuring the browser is identical for most wireless modem cards and data-capable phones.

1. Double-click the **Internet Explorer** icon to open browser. Select **Internet Options** from the Tools menu.

2. Click the **Connections** tab as shown right.

3. Select your connection in the **Type** field.

4. Check **Use proxy server** box.

5. Type **localhost** in the **Address** field as shown above. Type **9090** in the **Port** field as shown right.

6. Click ok to apply changes.

**Note:** localhost and 127.0.0.1 are functionally the same.
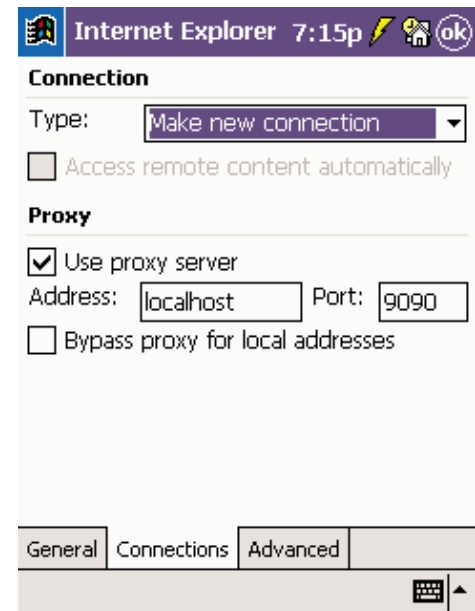
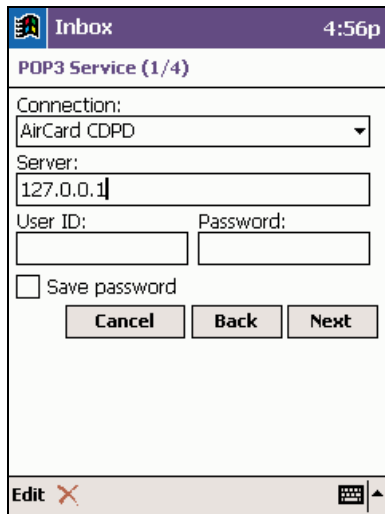# Appendix B – Configuring Email Applications

Outlook Express
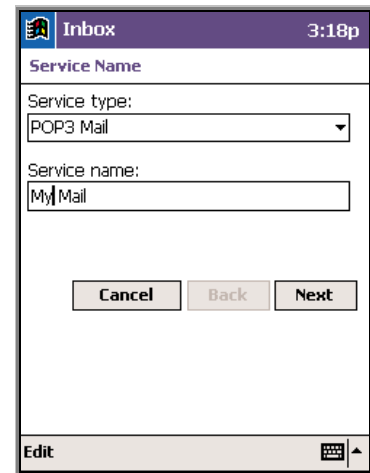
Open the **Outlook Express** program and point to the **Tools** tab along the top task bar.

1. Choose **Accounts** from the Drop Down menu.

2. Choose the **Mail** tab from the top.

3. Highlight the appropriate account and select the **Properties** box.

4. Click on the **Servers** tab and place the address **127.0.0.1** in both the **Incoming Mail** and **Outgoing Mail** field as shown below.

5. Click **OK** to close this window and return to the Internet Accounts window.

6. Click **Close** to return to Outlook Express.
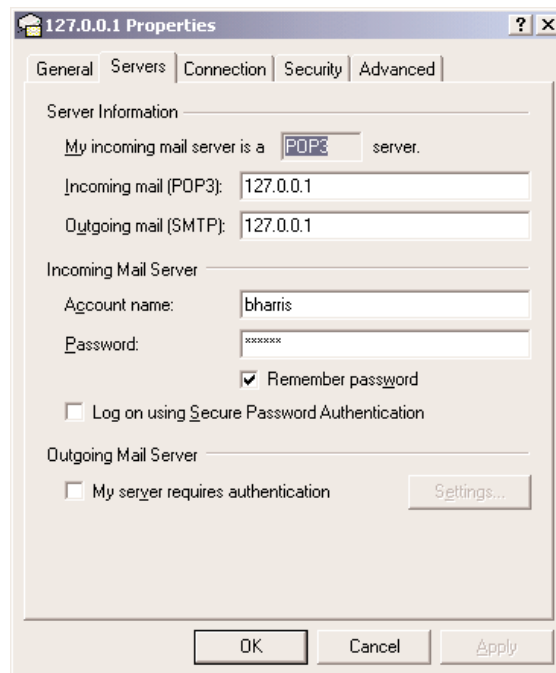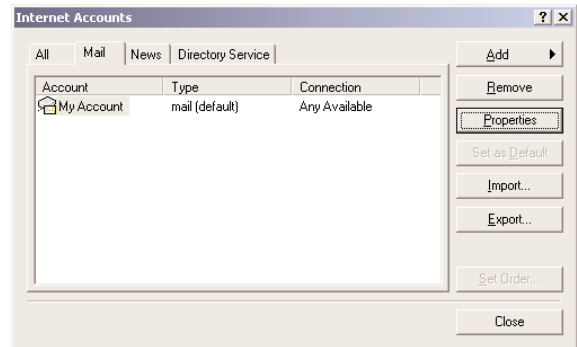
Pocket PC Inbox

1. Select **Inbox** to launch the Inbox service.
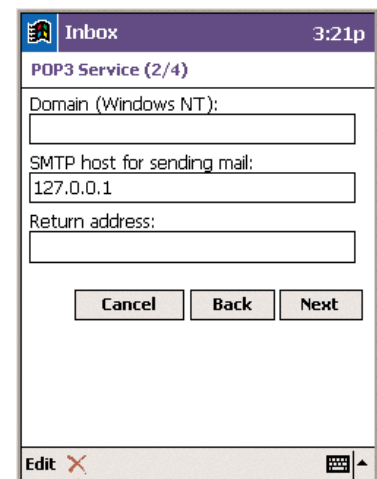
2. Click **Services** from the menu, followed by **New Service**. This starts the email setup process.

3. Select **POP3 Mail** as the service type.

4. Give the service a name. You may have multiple services installed at some point, so be sure to give the service a name that describes your account.

5. Click **Next**.

6. Select the connection you wish to use for this service. If you don't see your ISP connection on this list you should press Cancel, and first configure your ISP connection.

7. In the **Server** field, enter **127.0.0.1**.

8. **User ID** and **Password** should be the same as the one for your dial- up connection. The password can be saved by checking off the **Save Password** option.

9. Click **Next**.

    Note: If you don't know your ISP connection, contact your ISP.

10. If you are not connecting to a Windows NT Domain leave the Domain field blank.

11. In the **SMTP** field, enter **127.0.0.1**.

12. Leave the Return Address field blank.

13. Click **Next**.

14. The screen (on right) outlines the **Email Options.** You may set the options according to your preferences or allow the defaults. Select **Next** to move to the next screen.

15. The next screen (on right) outlines the Email options. You may set the options according to your preferences, or allow the defaults.

16. Click **Finish** to complete and **Exit** setup.

Note: Please refer to "Radius for Windows and Pocket PC" when you are ready to configure your MTS Mobility Client.

Appendix C – Uninstalling the Data Compression Client Software

How to Uninstall MTS Mobility Data Compression software for Windows:

1. From Windows, click **Start**, go to **Programs**.

2. After selecting Programs, locate and click on the **MTS Mobility Client**.

3. Next, locate and click the **Uninstall** option. This will uninstall the previous MTS Mobility client software.

4. A question will appear asking, "Are you sure you want to completely remove MTS Mobility - Client and all of its components?" Click **OK** to continue with the Uninstall process.

5. The MTS Mobility client software is now uninstalled from your machine. Click the **OK** button to exit and complete the Uninstall process.

Note: To install the latest MTS Mobility client software, please follow instructions detailed in Installing Data Compression Windows Client Software.

How to Uninstall MTS Mobility Data Compression software for Pocket PC

1. Quit MTS Mobility Data Compression program.

2. Click **Menu** then **Settings**.

3. Click **Remove Programs** on the System tab.

4. Click **MTS Mobility Client**.

5. Click **Remove** button.

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Who can I contact for help?

The instructions and procedures in this manual are presented step-by-step with visual representations of the windows encountered.

If you need additional help, please call MTS Mobility Customer Service at 225-5687 (CALLMTS).